Applicant: Richard G. vne et al.

Serial No.: 09/721,391

Filed: November 22, 2000

Page : 3 of 12

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

torney's Docket No.: 07039-294001

Listing of Claims:

\mathcal{A}

Claims 1-8 (Cancelled)

- 9. (Currently amended) A composition comprising nucleic acid, wherein said nucleic acid comprises:
- (a) a cell type-specific promoter for activating the expression of a gene in a specific cell type, wherein the cell type-specific promoter is human Tyr300 (SEQ ID. NO. 1);
 - (b) a therapeutic gene sequence operably linked to said cell type-specific promoter;
- (c) an amplification promoter element for amplifying transcription of said therapeutic gene in said specific cell type, wherein said amplification promoter element is an HSE; and
- (d) a sequence encoding a transcription activator, said transcription activator for activating said amplification promoter element, and wherein said transcription activator is HSF-1.

Claims 10-14 (Cancelled)

- 15. (Currently amended) A composition comprising nucleic acid, wherein said nucleic acid comprises:
- (a) a cell type-specific promoter for activating the expression of a gene in a specific cell type;
 - (b) a therapeutic gene sequence operably linked to said cell type-specific promoter;
- (c) an amplification promoter element for amplifying transcription of said therapeutic gene in said specific cell type, wherein said amplification promoter element is an HSE; and

Applicant: Richard G. Vne et al.

Serial No.: 09/721,391

Filed: November 22, 2000

Page : 4 of 12

(d) a sequence encoding a transcription activator, said transcription activator for activating said amplification promoter element, wherein said transcription activator is HSF-1, and wherein said nucleic acid produces a level of mRNA expression which is at least 100-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.

torney's Docket No.: 07039-294001

Claims 16-34 (Cancelled)



- 35. (Previously presented) The composition of claim 9, wherein said sequence encoding said transcription activator sequence and said therapeutic gene sequence are on different nucleic acid molecules.
- 36. (Cancelled)
- 37. (Previously presented) The composition of claim 9, wherein said amplification promoter element comprises at least one human HSE consensus sequence.
- 38. (Previously presented) The composition of claim 9, wherein said therapeutic gene is a cytotoxic gene.
- 39. (Previously presented) The composition of claim 38, wherein said cytotoxic gene encodes a fusogenic protein.
- 40. (Currently amended) The composition of claim 38, wherein the cytotoxic gene encodes [is] GALVenv, HSVTK, cytosine deaminase, nitroreductase, or VSV-G glycoprotein.
- 41. (Previously presented) The composition of claim 9, wherein said nucleic acid produces a level of mRNA expression which is at least 100-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.

Applicant : Richard G. Vile et al.

Serial No.: 09/721,391

Filed: November 22, 2000

Page : 5 of 12

42. (Previously presented) The composition of claim 9, wherein said nucleic acid produces a level of therapeutic gene mRNA expression which is at least 500-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.

ttorney's Docket No.: 07039-294001

43. (Previously presented) The composition of claim 9, wherein said nucleic acid produces a level of therapeutic gene mRNA expression which is at least 1000-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.

Claims 44-45 (Cancelled)

46. (Previously presented) The composition of claim 9, wherein said transcription activator is constitutively expressed.

47. (Previously presented) The composition of claim 9, wherein said therapeutic gene and said transcription activator are both operably linked to said cell type-specific promoter.

- 48. (Previously presented) The composition of claim 9, wherein said therapeutic gene and said transcription activator are both operably linked to said amplification promoter element.
- 49. (Previously presented) The composition of claim 9, wherein said transcription activator is HSF-1 comprising a deletion of amino acid residues 202-316.
- 50. (Previously presented) The composition of claim 15, wherein said cell type-specific promoter is a tissue-specific promoter.
- 51. (Previously presented) The composition of claim 15, wherein said cell type-specific promoter is a tumor-specific promoter.
- 52. (Cancelled)



Applicant: Richard G. Vile et al.

Serial No.: 09/721,391

Filed: November 22, 2000

Page : 6 of 12

53. (Previously presented) The composition of claim 15, wherein said sequence encoding said transcription activator sequence and said therapeutic gene sequence are on different nucleic acid molecules.

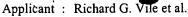
ttorney's Docket No.: 07039-294001

54. (Cancelled)

55. (Previously presented) The composition of claim 15, wherein said cell type-specific promoter is human Tyr300 (SEQ ID NO: 1).

- 56. (Previously presented) The composition of claim 15, wherein said amplification promoter element comprises at least one human HSE consensus sequence.
- 57. (Previously presented) The composition of claim 15, wherein said therapeutic gene is a cytotoxic gene.
- 58. (Previously presented) The composition of claim 56, wherein said cytotoxic gene encodes a fusogenic protein.
- 59. (Currently amended) The composition of claim 56, wherein the cytotoxic gene <u>encodes</u> [is] GALVenv, HSVTK, cytosine deaminase, nitroreductase, or VSV-G glycoprotein.
- 60. (Previously presented) The composition of claim 15, wherein said nucleic acid produces a level of therapeutic gene mRNA expression which is at least 500-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.
- 61. (Previously presented) The composition of claim 15, wherein said nucleic acid produces a level of therapeutic gene mRNA expression which is at least 1000-fold higher in *in vitro* cells of the specific cell type compared to *in vitro* cells which are not of the specific cell type.

Claims 62-63 (Cancelled)



Serial No.: 09/721,391

Filed: November 22, 2000

Page : 7 of 12

64. (Previously presented) The composition of claim 15, wherein said transcription activator is constitutively expressed.

ttorney's Docket No.: 07039-294001

65. (Previously presented) The composition of claim 15, wherein said therapeutic gene and said amplification promoter element are both operably linked to said cell type-specific promoter.

66. (Previously presented) The composition of claim 15, wherein said therapeutic gene and said transcription activator are both operably linked to said amplification promoter element.

67. (Previously presented) The composition of claim 15, wherein said transcription activator is HSF-1 comprising a deletion of amino acid residues 202-316.

